California 100 GARDEN



OCOTILLO (FOUQUIERIA SPLENDENS)

PHOTO BY R. R. MC LEAN

A P R I L 1 9 3 7

Balboa Park Bird Refuge

By Bertha H. Fuller

Tail of a Mermaid

By Ruth R. Nelson

Proteas

By Eric Walther

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The San Diego Floral Association

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Third Tuesday of Each Month at Balboa Park

"For Pleasure and Knowledge From a Delightful Avocation"

CALIFORNIA GARDEN

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American Rose Society American Gladioli Society

Hillcrest 3132-J

American Iris Society California Fuchsia Society

The San Diego Floral Association

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Main Office, San Diego, California

Silas B. Osborn, Editor

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Meeting held third Tuesday of each month at Floral Bldg., Balboa Park, 7:30 P. M.

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Report of March Meeting

Professor and Mrs. Cockerel presided at the March meeting of the Floral Association and members learned all about "bees-ness." By means of the Cockerels' motion picture camera the bees were presented in a most interesting manner. They were seen bumping in and out of snapdragons, rolling around in opuntia blossoms with the stamens closing in on them to deposit pollen on their busy backs and feet and building their homes, fighting the while to protect the domiciles from lazy neighbors.

Bees are always said to be interesting but Professor Cockerel proved they were. One of the outstanding generalizations he made about them was their variety-California has its own set of bees for its flowers and Africa its own set. And a flower transported to either place stands a good chance of missing the particular bee accustomed to visit this flower. One of the things too that make bees adapted to spe cial flowers is the length of their tongues-short tongues for certain flowers and long tongues for others.

The Cockerels also showed some colored moving film of flowers which were highly pleasing. They warned about trying to use colored moving film without a meter and such necessities plus plenty of good coaching. One of the beautiful color shots was of tritomas and somebody better start growing more of

Thirtieth Annual Spring Flower Show

The San Diego Floral Association will hold its Thirtieth Annual Spring Flower Show Saturday and Sunday, May 8th and 9th, 1937; opening Saturday at 1:00 p. m. in the Palace of Entertainment, Balboa Park, San Diego, California. All entries must be in the hands of the Clerks by 9 a. m. the first day of the show, who will be on duty at 7:30 a. m.

All entries must be entered and properly arranged by 11:00 a.m. so that judging may be completed

these flowers in San Diego. Or there'll be complaints to the mayor.

Miss Sessions spoke afterward and distributed some beautiful sprays of acacia pubescens, the greenhouse acacia in shivery sections. She also brought sprays of a darling soft crimson chorizemathe varium. It's a beauty and it keeps in water if not set in the sun. We tried it. C. I. Jerabek had some beautiful flower and shrub specimens for display. But some one did not give him time to label them. Grr! That labeling is important. Keep the man at it. Oh yes, Miss Sessions also showed the Easter heath, Erica codinoides veitchii. Lovely thing and this correspondent thinks she knows it's fragrant. Don't disillusion her. Coffee and biscuits were served after the program which ceremony certainly adds a warm and festive touch.

-Ada Perry.

and awards made before opening the show to visitors. A schedule of Class and Show Rules may be obtained from "Dunning's," 909 Sixth Avenue; Harris Seed Company, 840 Market Street; Millar Seed Company, 726 Broadway, or by writing to Mrs. Mary A. Greer, General Show Chairman and President of the San Diego Floral Association, Box 323, San Diego, California. The names and telephone numbers of the various Chairmen

FLOWER SHOW CHAIRMEN

Roses-Mrs. Geo. Gardner. Phone Bayview 0346-M. Mrs. C. M. Hosmer. Hill. 1101.

Sweet Peas-Mr. W. H. Gibbs. Phone Hill. 1550-J. Iris—Mrs. Maurice Braun, Bay-

view 3954. Mrs. Wendell Brant. Hill. 5373.

Arrangements in Baskets, Bowls and Dishes-Pieter Smoor, Phone Main 4875. Miss Etta Schwieder, H. 4950, and Mrs. John Nuttall,

Miniature Arrangements-Mrs. E. R. Burke, Hill. 2372.

Annuals and Perennials-Mrs. E. W.S. Delacour. Phone Hill. 4021 Cacti and Succulents-Mrs. E.W.S. Delacour. Phone Hill. 4021. Mrs.

W. B. Dexter, H. 0873-W. Luncheon and Tea Tables—Mrs. Mrs. Lester Wright, F. 2261. Clerking-Mrs. Elsie Case.

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Coronado Flower Show

Plans for the Coronado Flower Show, which is to be held this year on May 1 and 2 went forward today, following a recent meeting of the Coronado Floral Association at Hotel del Coronado.

The following officers were elected to the executive committee for the year:

President, Mrs. Dwight Peterson; Honorary Vice President, Mrs. Marshall O. Terry; 1st Vice President, Harold A. Taylor; 2nd Vice President, Mrs. Thomas Sharp; 3rd Vice President, Mrs. Armand Jessop; Secretary, Miss Blanche Rogers; Treasurer, Mrs. Darwin R. Aldridge; Honorary chairman, Hostess Committee, Mrs. J. H. Pendleton.

The plans of a May day flower show has many intriguing possibilities, according to those in charge.

Committee chairmen, as announced today, follow:

Grounds, E. A. Ingham.
Information, Mrs. Harry W.
Smith and Mrs. W. E. Frenaye.
Prizes, Mrs. Roy Pickford.
Publicity, Mrs. T. N. Alford.
Entries, Mrs. E. A. Ingham.
Typing, Miss Bertha Fosdick.
Labelling, Miss Kate Rogers.
Judges, Harold A. Taylor.
Roses, Mrs. Peter MacKenzie.
Open Class, Mrs. Alonzo Jessop.
Cacti, potted plants, etc., Mrs.

Harry L. Perkins. Fruit and vegetables, Mrs. Walter Poor.

Shadow boxes, Mrs. Douglas and Mrs. George Seitz.

Flower arrangements, Colonel

and Mrs. S. W. Bogan. Table arrangements, Misses Elea-

nor and Ruth Harlow.
Commercial flowers, Mrs. Ar-

mand Jessop.
Gardens, Mrs. Lewis Coxe.

Childrens' Exhibits, Mrs. W. W. Crosby.

Wild Flowers Mrs. Barroll F.

Wild Flowers, Mrs. Barroll E. Anderson.

Displays by civic, state, and national institutions, Mrs. Armand Jessop.

Tung Trees . .

By W. A. Butterworth

305 South El Molino Ave., Pasadena, California March 20, 1937.

Mr. Silas B. Osborn, Editor California Garden P. O. Box 323 San Diego, California. Dear Sir:

I have taken your California Garden for some years and have enjoyed every number of it.

I have a little favor that I want to ask of you; I have some nuts of the famous Fordii variety of the tung oil tree that grows in the mountains of China. This tree produces the finest crop of nuts and out of the nuts is pressed the finest tung oil produced in China. The tree grows in poor, sandy soil, underlaid with clay. It is a wild, forest tree and grows where the temperature goes to 20 degrees above zero in the winter and sometimes it snows, and yet the tree grows under these conditions and produces the finest nuts in China.

The manufacturers of quick drying varnish in the United States have found that the tung oil is the only oil they can use to make this quick drying varnish, so they have imported from China many thousands of gallons of this oil, and today they are buying from China two-thirds of all the oil China produces, and yet want more. So the manufacturers combined and planted this Fordii variety of the tung tree in Florida, Georgia, Alabama, Mississippi, Louisiana and Texas and today they have about 100,000 of these trees planted. Many of the trees are bearing nuts and these nuts have been pressed in the modern pressing plant and they produce tung oil that is so far superior to the Chinese oil that it is worth 25% more in the regular market. All of this oil is taken by the manufacturers and they are looking for more and more of it. So they sent out an appeal to the United States to try and find out every place where the tung tree can be grown successfully.

I am sending you a box of these nuts. Please do me the favor to distribute them among those who will grow them and take care of them so we can find out how successful they will grow in your part of California. They do not need a rich soil-they will grow anywhere that the orange tree grows and the tap root of the tree, being very long and very strong, soon penetrates into the lower formations of clay and will absorb from it a great deal of moisture as well as fertilizer. This strong tap root will hold the tree against any wind; a forty mile gale will not blow it over.

There are three varieties of the tung tree; the Fordii, growing in the mountains of China is hardy here, but in the lowlands of China and also in the Philippine Islands there are two varieties that are so tender that they will not stand our winter climate, and unfortunately a number of these nuts from the tender trees have been shipped into California at different times and the growers who have tried to grow them found that every time the tree has frozen in the winter; while the scattered trees coming from the Fordii variety of nuts have lived in different parts of Los Angeles and Orange Counties and have produced nuts.

Last summer I found a small nursery of the Fordii variety of tung oil tree growing in our foothills. It was planted by a sick man and had had very little care and little water and had been planted in the wash soil from the mountains which was composed of sand, rocks and some clay, and yet, these seeds grew into fine young trees and when I saw them last summer they were in splendid shape. This winter, after the freeze, I went back to see what was left of the trees, as the freeze at this point was very

(Continued on Page 9)

Balboa Park Bird Refuge

By Bertha H. Fuller, Director of Conservation California Audubon Society

When we went out to Balboa Park one day in the last week in January, 1937, it was our real intention to study the cactus garden. But we had no more than arrived at the Park when we decided to study some species of birds that were giving us some difficulty—which led to the zoo to see the eagle cage—which kept on leading us until quite by chance we saw what we should have driven many, many miles to see had we known of it in the first place!

We had studied the native whistling swan and wondered about the other species which we could not think was the trumpeter—yet we have never seen a trumpter and we did not have our bird field book in our hand and could not decide right then—then there were the pelicans, white, which we knew to be ours, but what the brown ones were we did not decide either. But we did know the gulls' names and sympathized with the seals in their loud yowls for food.

Turning the corner we came unexpectedly to two tiny little lakelets, buried under the steep canyon wall trees. They cannot be over 200 feet long, either of them, yet we saw a surface of water absolutely covered with birds. Approaching we found them to be mostly the beautiful pintail, or sprig ducks! Hundreds of them floating about, "tipping," or quietly resting on the little bank between the fence and the water's edge. So tame they watched the approach of visitors with hardly a flicker of an eyelid.

What a grand sight! And so close one did not even need glasses through which to peer painfully trying to make out the exact coloring.

We looked for the name tickets but soon saw they were inadequate as most zoo tickets are—changes take place so quickly the name tickets can hardly be expected to keep pace.

The pintail is the only abundant duck in the state now and is being the most hunted. It nests in far north latitudes. From a recent "Clip Sheet" from the U. S. Biological Survey we learn that a pintail banded on Los Banos, California, Refuge on January 3, 1936, had recently been taken by an Eskimo in far away eastern Asia!

Except for the pintails no other species of bird was numerous.

There were a few baldpates—beautiful duck with white feathers so arranged on his head as to make his pate appear bald. The male has a lovely green stripe through the eyes below the bald pate, which the female does not have. The baldpate has bred casually in California but it is not at all unlikely the specimens we watched on the San Diego refuge winged their long way from northwestern Alaskan waters.

It was almost impossible to believe that only some half dozen greenheads, or mallards, there! It seems, now, that only the changed domestic ducks that have been offsprings of the mallard will remain, after a few years, to carry on worldly immortality for this beautiful bird. Kindly, friendly mallard ducks that have allowed human beings to domesticate their young, even themselves, and have at the same time been robbed of places, as well as being used as targets altogether too many times! That's gratitude for you!

Two beautiful shoveller ducks went waddling about on their short legs. Shovellers look squat, even on water—great wide bill, rich cinnamon brown burnished iridescent trim, snowy white breast and rich green head! It takes more than two shovellers to make a really decent "mill" so we did not get this thrill. Shovellers in groups will suddenly begin paddling with one foot, at

the same time tipping up nose deep, so that the entire flock is going at some speed around and around, guzzling and straining for food on the stirred up watery bottom. It is a mob idea so a few do not attempt it. Phalaropes will, even if alone, but I never saw shovellers try it. They used to nest in Southern California but with so few places left them these specimens likely came from much farther north than United States even.

Four or five green-winged teal were sleeping or paddling about. It has one of the most beautiful color patterns of all birds! The green speculum, male and female, is unmistakable. They are becoming fewer yearly. To see the cinnamon and green-winged teal were not our only joys—imagine seeing two bluewinged teal which we had not seen for fifteen years! We saw two males on the refuge.

Four or five redhead ducks, round headed birds, with the dustier red-brown-headed canvasbacks, slope-foreheaded birds, were interesting studies in identification. The redhead is a gray bird, while the canvasback is pure white at first sight. Both birds are on the fully protected list. Both used to nest in the state freely but agricultural activities have disturbed them considerably. They are becoming very rare. The redhead is the bird once called the pochard.

One scaup appeared—but far be it from me to be positive as to its identity. I thought it to be a lesser but should not care to say. Either species, however, honored the city of San Diego with its presence as its wintering range is somewhat farther north. Likely it nested in far away northern lands.

Two or three female ruddy ducks appeared. This little duck is coming back in a few numbers and as we stood watching these little mother ducks we could but think of the great clutch of great large white eggs we had just seen in the museum and tried to picture this tiny duck incubating all those eggs!

Dawson writing only some ten or fifteen years ago said: "When the

more desirable species are still further reduced in numbers, the covetous eve of the gunner will fall upon this bird, as it has upon the mudhens of the East. Would that some earnest word of mine might shield them from such a dismal fate. Our pond life is becoming pauperized enough as it is, God knows. Why should we fall upon these innocent and ardent little Spats, and terrorize them until they are forced to drag out a surreptitious existence?" The little ruddy met his fate and the Dark Angel took away so many of his kind that he was placed on the wholly protected list two years ago. Its entire life is one of differences from other ducklife. It is far friendlier than even the mud-hen or coot

Usually no bird adorns a bit of water scene more than the white-billed little dark gray blue coot, but when a few of them suddenly appeared in our glasses' range across the pool we were surprised. It is rather a lonely bird in that it is the sole representative of the coot subfamily in America. Inasmuch as its little figure still may be seen as one drives about the country and crosses a bridge now and then we hope it may long live in spite of the 25 a day bag now allowed.

Lovely snowy geese and whitefronted geese. Do not be misled by that "white-fronted" name. The white is merely a line around the base of the bill. Since the snow geese and white-fronted geese both nest in Arctic and sub-Arctic regions only gunning has diminished their numbers so tragically. The snowies are fuly protected by law.

Since size is a very difficult part of bird study we could not decide which of the Canada geese we were watching. It seemed large enough for the Hutchins, but not large enough for the real big honker. Anyway, we did see several of the Canada goose group and enjoyed it almost as much as though we had its name at our fingertips.

On the short walk down to the refuge we found kinglets, goldfinches, warblers, sparrows, towhees, and a white-winged dove. This latter bird got us guessing—was it a stray

Begonia Notes . . .

. . American Begonia Society Bulletin

ONCE IN TWENTY-FOUR YEARS

By ALFRED D. ROBINSON

Shall we be "loyal" Californians and look everywhere but at our poor frozen plants say, "It is nothing" or stick to our Begonias and see if the freeze of January can teach us anything? I stay with the

Begonias.

Day after day I have visited with the dying and dead, and have tried to fit cause to effect. I go down one walk and think I have found something, only to traverse the next to find I was mistaken. So I warn against conclusions based on single or limited examples. Like the women grinding at the mill (see the Good Book), of two plants, similar in variety, in size and not a foot apart, one was taken and the other left. At first it seemed possible that the degree of moisture in the soil might be the explanation but it was not. Other theories were propounded and rejected.

These conclusions still stand: The cold struck down and from the South, and even a light cloth cover might have been an adequate protection—this is deduced from seeing plants under tree ferns and even the skeleton branches of a wisteria, showing little ill effects; the higher the lath ceiling the better the protection—this because the low house suffered most though it has always been considered and has been scheduled by the thermome-

ter, as warmer; stuff up on three foot benches suffered equally with that on the ground.

The most resistant varieties were Mrs. W. A. Wallow (conspicuously), the Haageana and Fruticosa groups. The Feastii group just jellied, though Scharffiana both in pots and baskets came through with very little damage though on the coldest morning its leaves were stiff as a board. Poor Rosea Gigantea, a real winter bloomer, was massacred. Strangely enough the Manicatas stood it better than the Feastii group. The Ricinafolia tribe were cut back to the rootstock, perhaps killed and in places Verschafelti suffered. A great many ferns were hard hit.

It is difficult if not foolish to formulate a detailed protective program because a killing freeze occurs so seldom in our bailiwick, the last that hurt Rosecroft was in 1913, just twenty-four years ago. How can we prepare for an event that far away with the certainty that ere then all kinds of improved protective measures will have been dis covered. ONE THING WE CAN DO, and that is if we have both lath houses and grow begonias have also A PROPORTIONATE SPACE UNDER GLASS This will not be wasted, freeze or no freeze. The glasshouse at Rosecroft saved its neck, though unheated and the thermometer registered below forty.

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from the nearby great cages, or was it in truth a native white-winged dove? We had thought they wintered farther south—and when one is studying birds at a zoo he gets a peculiar feeling of being unable to recognize his own Biddy in the backyard style.

Ten species of ducks and four of geese and one of swans! What a marvelous spot is your Balboa Park to give refuge to birds that are far too precious to put in cages. You

may send to far places and buy the other beautiful creatures so that we may see them, but no one on earth may come to California to buy a single native species!

Using beloved Dawson again: "Come now, let us make a truce with the children of life, and share with them the good things which we plentifully enjoy. There is happiness enough for all; and some of us there are who cannot be happy unless all are."

Tail of a Mermaid

By Ruth R. Nelson

Have you tried to find a place in your small garden for that lovely wayward single rose, "The Mermaid," always desirable in spite of its capricious thorniness and agile habits?

The Mermaid rose is so wellnamed that we feel sure its originator must have been willing to step back into that legendary realm of fairy creatures, well-beloved by us as children. With golden stamens crowning petals smooth as ivory, the Mermaid's blossoms seem poised upon their shimmering back ground of green leaves like oldfashioned pond lilies which open fragrant, creamy petals to float where the river ripples against a sunny bank. Never does our Mermaid blossom that we do not recall just such a spot near a little Rock River town in southern Wisconsin.

However it may have been the Mermaid's long stout branches, vigorous and arching, with foliage as clean and glistening as we know the strong smooth tails of all Mermaids must have been, that gives this rose its name. Nevertheless, with a Mermaid rose well established in the garden, we have finally been compelled to lay aside these early fancies, and cope with the very real problem of taming such an indomitable creature.

Our little once-in-awhile gardener brought us this Mermaid, grown from a cutting, to fill a certain empty spot on the edge of the rosebed. Very soon the little bush began to send out arms (not legs) and tails in all directions. By its second spring we had a plant that promised to spread out far and wide. Then we solved this new difficulty by cutting away all except two fine canes, and setting up a tall stout stake to train the plant, and our Mermaid lost its sprawling habits forever.

Soon we were compelled to add a second stake and a heavy crosspiece to support the blossom ends of the branches. Last year still another set of stakes and crosspieces enabled us to train this robust rosebush into an arbor-like setting for a garden seat. Now the Mermaid has entirely recovered from its struggle with winter, and the plant is covered with myriads of glistening shoots that hold promise of a bright new crown of leaves and blossoms which will probably renew our fanciful old dreams.

We believe that the Mermaid trained in some such way, becomes a real joy in a garden. It is not a good rose for cutting, because of its poppy-like habit of closing at night. But when the blossoms have opened a second time, they can be brought into the house for "floating' bouquets" which are truly delightful, because of the Mermaid's glistening foliage as well as its creamy flowers.

Here at Rancho Santa Fe this rose has been used with varying degrees of popularity. One of the first Mermaids to be planted here has now grown into an arching cave high enough for a man to stand in. Planted along many orchard ridges, the Mermaid is not only splendidly decorative, but also forms a thorny barrier very discouraging to the ever present Mr. Peter Rabbit and his kinfolk. It is used in large garden plantings for the same purpose, and is then usually permitted to grow in an untrammeled way.

Yet we believe the Mermaid's outdoor beauty is best enjoyed when it is possible to keep the plant well-groomed, snipping out the dead blossoms as the flower clusters gradually unfold. So we are glad that we tied a knot in our Mermaid's tail and can control the activities of this favorite rose.

TREE DAHLIA

The tree dahlia of Mexico grows from 10 to 12 feet high and is a late fall bloomer here.

Warm Water Baths Help Potted Plants

Hot water or vapor heat treatments benefit many greenhouse plants. Designed primarily to kill destructive mites, the baths also stimulate growth in some cases.

Great care is necessary in giving plants their hot-water dips. Too much heat is as fatal to the plants as to the pests. Longer dips in warm, rather than hot, water, entomologists of the United States Department of Agriculture have just found, destroy the mites without injuring such extremely delicate plants as the cyclamen, chrysanthemum, geranium, lantana, fuchsia, and begonia. Most plants can stand water at 110 deg. F. for 15 minutes, but the cyclamen mite (Tarsonemus pallidus) cannot. Still lower temperatures-108 deg. F.-lessens the danger of harming the plant and destroy the mites if the period of exposure is lengthened to 20 minutes, the recent studies showed. Longer treatments are necessary when mites occur on the plants below the soil surface. Immediately following treatment all excess water should be drained away from potted plants to avoid root injury.

Specially designed tanks, with electrical devices for controlling the temperature, are best for treating mite-infested plants. Or a tank filled with water at the right temperature, in which the plants on wire baskets or slatted trays are set, may be used.

Submerging tube rose bulbs in water at 110 deg. F. for 60 minutes, the entomologists found, destroys the common bulb mite without interfering at all with the satisfactory development of the plant.

Treating the root clumps of spirea with vapor heat at a temperature of 110 deg. F. for 1 hour in another series of tests, not only killed the larvae of a destructive weevil, but also stimulated growth, so that the flowers bloomed from 40 to 60 days earlier than usual.

The flora in Greece is the richest in number of species, considering the area covered, in all Europe.



Question Box.

By R. R. McLean

OUESTION: Will you kindly answer a few floral questions through your column? (1) I have a hundred two-year old rose bushes and I am very anxious to do my best by them for the greatest growth. I have no fertilizer. I would like to know what to do to obtain rose blooms with long stems. I am keeping all first and second crops of buds cut off. (2) Also will you tell me if the gray green red berried shrub seen so much around San Diego homes can be grown from slips at any time of the year and how long does the seed take to sprout? (3) When is the best time to root slips of carnations and (4) how long should the glad bulb and seedling be left in the ground before digging and drying? I will be very grateful for the above knowledge. N. B. I have the use of practically 8 large lots; could you suggest any way of my earning a living off of them? Have no money as capital to start.

Mrs. R. R.

ANSWER: To obtain long stemmed roses, proper pruning is necessary. Although pruning practices vary with the variety the theory is to divert the flow of sap to fewer and consequently longer shoots. Where heavy pruning is practiced, fertilization is absolutely essential. Animal fertilizers and blood and bone used together make an ideal fertilizer. Thorough irrigation should precede and follow fertilization, both to insure against burning and make available plant foods which must be in solution in order that the plants can make use of them.

The gray-green red berried shrub referred to is probably cotoneaster pannosa, which is commonly propagated by seed sown in the spring. The seeds germinate in from one to two months, according to age of the seed. While the rooting of cuttings or layering of shoots may be partially successful at any time in this district, yet the best time is in the fall, using well ripened wood of the current season's growth.

Late spring is the best time to root carnation cuttings, taking care of

course, that they are not allowed to dry out. A light syringing with water every morning will maintain them in good condition.

Glad bulbs, and the bulblets also, should be left about ninety days after flowering before lifting.

It is hard to suggest any method of making money from the soil without having at least a ittle capital to begin with. Perhaps the growing of flowers for the market would bring the quickest returns for the amount invested.

QUESTION: California holly leaves appear brown, almost as if scorched, especially on the inside of the tree. Also, some leaves are covered on the underside with white powdery wax-like stuff. Please tell me the cause and remedy.

B. L. ANSWER: Thrips are responsible for the brown scorched leaves. These very small insects chafe the epidermis of the leaves, giving them the appearance you have noticed. Spray with tobacco and soap solutions, or use a teaspoonful of black leaf 40 to 3 quarts of soapy water. Make sure that both the upper and lower surfaces of the leaves are covered with the spray. Nicodust is a powder containing nicotine in varying proportions. For thrips, get nicodust guaranteed to contain from 6 to 8 per cent of actual nicotine. Dust the tree with it thoroughly, abplying it on a warm still day.

The white powdery wax indicates the presence of minute insects known as white flies. The adults are very small, white two-winged flies known as mealy wings. Their minute eggs hatch into flat scale-like larvae which attach themselves to the undersides of leaves, sucking out the juices and dropping off honey dew. In this honey dew a black fungus later grows, giving the leaves a black, sticky appear-

Use any one of the oil sprays sold in seed stores for scale control. Spray thoroughly and with as much force as possible.

Proteas

By Eric Walther, Golden Gate Park, San Francisco

STRIKING floral effect scarcely inferior to Banksia are the Protea's proper. The large, often brightly colored bracts surrounding the capitate inflorescence constitute a sufficiently novel ornament to always attract the attention of any visitor. Their likeness to a glorified artichoke is quite obvious, even if misleading. Botanically, this similarity is still another illustra-tion of the dictum that "like conditions produce like results," even in quite unrelated families of plants. In reality of course, Protea and the Proteaceae are removed a long ways from the Compositae. The most closely allied South African genera, to Protea, are Leucadendron, the Silver-trees, and Leucospermum, familiarly remed "Pincushions." Of these Leucadendron differs in being dioecious, and Leucopsermum obviously is distinct in the usually much smaller involucre, as well as other technical characters. Banksia and Dryandra are the West Australian equivalent of Protea, their obvious phylogenetic affinity suggests similarity also in cultural requirements. However, the strictly Cape species of Protea, at least, are much less successful outof-doors, particularly in the Southern part of the State. Whether the consequence of unduly heavy soil, alkaline waters or a too dry atmosphere, all of the species tried so far in Southern California have proven to be short-lived. In the San Francisco Bay region, though, the more frost-resistant species are much more at home. P.longiflora, for instance, has now attained a height of over 10 feet, growing quite unprotected in the open.

P.susannae, pictured herewith, flowers throughout the coldest January weather, doing so even when the thermometer drops to below the freezing point. This species, and the even more delicately colored P.compacta are the best of the 17 or more species which are being tested here and have flowered. As a matter of record we here list the species now growing at Golden Gate Park, San Francisco: (*--has flowered.)

acerosa amplexicaulis *compacta cynaroides grandiceps harmeri humiflora lacticolor *latifolia *longifolia mundtii *mellifera neriifolia obtusifolia pulchella *scolymocephala *susannae

Only time can tell which of these shall ultimately prove adaptable and worthwhile, but certainly a thorough test of all obtainable species seems in order. Known to include over 110 species, ranging from the Cape of Good Hope to Abyssinia, the genus Protea certainly holds some promise for a region so favored climatically as California. All of the species listed above were grown from seed received through the National Botanic Gardens at Kirstenbosch, Prof. Compton, Director.

Dewey Kelly

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(Continued from Page 1)

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Begonia Notes

(Continued from Page 4)

TUBEROUS BEGONIA CULTURE

By B. O. WILLS

In analyzing our troubles, it is obvious that our failures are either in the bulbs themselves or in our method of growing them. If the bulbs are responsible, we should discard them. The present day market is very well supplied with bulbs and seedling plants that should give excellent results. If it is in the way we are trying to grow them, I find the easiest rule to apply is, "they like best that climate and condition that I like best." This rule can be summed up as follows:

Atmospheric conditions: not too hot—not too cold; not too dry; not too wet; not too sunny—not too shady. Not close, never drafty.

Soil conditions: not too light—not too heavy, porous with good drainage. Not alkaline—not too acid; not too wet—never dry.

Fertilizer conditions: not over fed—not under fed. Well nourished at all times.

In growing tuberous begonias in pots, the following points must receive careful attention: soil mixture, size of pot, drainage in pot, depth of planting bulb, then uniform watering and uniform feeding.

In selecting a location for the potted begonias, especially applicable to greenhouses, these points are of utmost importance: Ventilation, temperature, moisture in the atmosphere, and the light conditions. We must always guard against over crowding, which is our common fault.

Tuberous begonias should never be neglected in any detail. You cannot place a bulb in a pot of soil, then set it aside with the idea that if it is watered occasionally it will respond with a magnificent display of eight inch blooms like those that can be seen in the greenhouses at the Vetterle and Reinelt hybridizing gardens near Santa Cruz. It simply cannot be done that way. (Continued on Page 9)

L. A. Cactus and Succulent Show

By Murray Skinner

The Los Angeles Cactus and Other Succulent Show will be held at the Manchester Playground, 88th and Hoover, Los Angeles, June 26—1 P. M. to 10 P. M. and June 27, 10 A. M. to 10 P. M.

This show is put on by a unit of the Los Angeles Playground Department. It is free. It is made up of Succulents, including cacti. Commercial men may enter and win ribbons. All other prizes go to the amateurs, except that anyone is entered, automatically, for the Sweepstakes cup, which is regularly given by the Mayor of Los Angeles. Last year an amateur took this prize. Other cups come from city officials and local business groups. Our effort is to educate to the beauty and the way of using these odd and beautiful plants, while, botanically, this is one of the finest shows of the kind. We endeavor to draw all types of people—the mere onlooker, who is pleased with landscape or garden or plant or flower arrangements. The scientific student -who is pleased with the botanical knowledge carefully prepared and arranged with the plants. We are building a new ilea in the fact that these plants lend themselves to flower or decorative arrangements, and hope to have something really good this year. Last year we had much fun, and much irritation, as, for example, when I arranged an exceedingly spiny Opuntia, graygreen in color, in a gray-green bowl with a base about the plant of gray gravel, which I then turned on its side, and labeled the "picture" "Ouch!" The peek of the amusement was reached when one woman, turning around to find her youngster standing beside this affair, gave a startled and irritated exclamation and endeavored to replace the plant in its bowl and to set the bowl up as it seemed it should belong, then hurried the child away from that particular spot. Even some of our own members, who were new at this type of thing, spent moments replacing the plant, only to become suddenly conscious of what the word "Ouch!" imported and then to drop it back into its arranged position. One arrangement, a really beautiful thing in black and green and pale golden yellow and soft red, with yellow candles, was so arranged that the idea was, the woman preparing it might have, let us say, been called away to the telephone before the matter had been finished. One of the candles lay on the table, with a few of the leaves of the plant used dropped casually beside the bowl. If I re-arranged that thing once, I'll warrant I did it a dozen times the first afternoon, until finally I had to fasten down the candle, and give up trying to have the leaves lie as intended. We have very good help at our Show.

This Show is not affiliated with any other group, as The Southwest Cactus Growers, as the groups have named themselves, meet only under Playground regulations, and are not even organized into a political club, though they have their parts to do in all affairs.

Boy Scouts work with us, patroling the Show while it is in progress. Our average attendance is around 10,000 people. Our Judges are some of the biggest—and by that I mean biggest, not most commercial—men in the game. In fact, the commercial men who are working with us are definitely out to have us succeed in having a strictly amateur Show, and by amateur, we state in our Schedule, One who does not sell plants.

Rancho Santa Fe Flower Show

The Rancho Santa Fe Flower Show will be held in the school-house April 24-25. Several novelty classes will be featured and the Junior Garden Club will exhibit. An unusually large rose section is expected this year.

When Spring Arrived

By Ida McLean

Rumors are rife that Spring is here Though zephyrs chill belie it— But signs portend the season's near, So who would dare deny it?

Shop-windows bloom with furbelows

And ducky Easter bonnets— To wear atop the new spring clothes

And set folk writing sonnets.

Just this morning, cedar waxwings Came to make an annual call— Volplaned down to perfect landings In a treetop, one and all! Their landing field, our pepper tree:

With red berries quite a few— They raided with celerity Ere they disappeared from view!

A bluejay now, in plumage bright, Flits importantly about—

To select a likely homesite
In the cypress tree, no doubt.

Spring has loitered while adorning All the meadows, vales and hills—

And she got here just this morning

With this pot of daffodils!

Begonia Notes

(Continued from Page 8)

However, if we follow our growing instructions carefully, giving close observation to the necessity of creating their growing needs, we should all be able to get excellent results.

I do not consider the tuberous begonia a happy house plant. Atmospheric and light conditions are generally against it. Some sun rooms and sun porches correct these conditions to a certain extent. There is a new late fall or winter blooming hybrid, now in the experimental stage at the Vetterle and Reinelt gardens, which is proving to be an excellent house plant and very happy in even a rather dark room.

I am an advocate of growing in quantity for best results. In the growing of a few plants, I always feel that I have to be too much of an expert to have them all perfect specimen plants. In growing many, the faults of the few are generally over balanced by the excellent specimens in some of the others.

In experimenting to find a happy location for them in the garden, I suggest using seedling plants. These can be obtained during the month of May, weathered, hardened and ready for planting in the garden. They should receive careful attention as to water and protection from the sun until they have become well established.

We are always glad to welcome to our garden any of the members of the Begonia Society who are in the vicinity of Santa Cruz during the begonia flowering season.

DO IT NOW By H. P. DYCKMAN

Provide good circulation of air in the begonia house, whether it is of lath or cloth; it will help to prevent the spread of decay which may develop as warmer weather follows the cold and rains of the winter.

Add a generous top dressing of leaf mold about those begonias that are established in the ground; cut out mold wood.

Seed of tuberous begonias planted now will produce late fall flowering plants. Watch the tubers and as they sprout plant in flats of leaf mold and peat. Complete cultural directions are in the special tuberous bulletin.

Cuttings of fibrous types can now be started in unheated propagating beds; Rex leaf cuttings also. Bottom heat will still speed them up.

Tung Trees

(Continued from Page 2)

severe. I found the trees were in perfect condition and had not frozen, so I bought five of them and planted four of them on my place in Pasadena. One I sent to Oxnard, California, and it is now growing there. So you can see that the cold winter had little or no effect on this tree, so there is no reason why we should not plant it in large numbers and make money out of it as they do in the South.

The Fordii variety of tung tree grows to be the size of a walnut tree. In the winter time the leaves drop off and when the nuts are ripe, they drop to the ground, so it is easy to gather this crop. No insect of any kind will touch this tree. It needs about the same amount of water as the orange tree, but if the clays under the soil are heavily soaked with water and the tap root can reach it, it may take less than the orange tree. The tree will live for fifty years and produce a crop of nuts after five years of age.

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